

## ABSTRACT

The present invention presents an architecture to dynamically measure and estimate the throughput perceived by a user during a connection in real-time in a wireless network system. The architecture system design of the present invention allows for information gathering independent of the mathematical models used and takes into account security settings in the network hosts. The present invention also sets forth a number of throughput estimators (TEs) that can be used within the architecture to gather the information needed to carry out the throughput estimation calculations. The throughput estimations can then be used for download rate control, QoS, load balancing, etc. The present invention also provides algorithms to calculate the real-time throughput experienced by a user flow.